April 1989

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

CERTIFICATION 1

CERTIFICATION OF SEDIMENT CONTROL SYSTEM CONSTRUCTION

Permittee's Name Bennoc, Inc. Permit D-1159

Complete both certification statements listed below.

I, the undersigned, a surveyor or engineer registered in the State of Ohio, hereby certify that the measurements of the constructed sediment control system described below conform to the measurements contained in the approved ~~original~~/"as built"* (specify one) design plan.

Donald M Brafford P.E. 2-4-98
Signature Title (engineer/surveyor) Date

I, the undersigned, an engineer registered in the State of Ohio, hereby certify that the sediment control system described below has been constructed per the approved ~~original~~/"as built"* (specify one) design specifications and criteria and that:

1. the embankment foundation area was cleared of all organic matter and the entire foundation surface scarified;

2. the fill material was free of sod, large roots, other large vegetative matter, frozen soil, and coal processing waste; and

3. the fill was brought up in horizontal layers of such thickness as required to facilitate compaction in accordance with prudent construction standards.

ENGINEER'S SEAL Donald M Brafford P.E. 2.4.98
Signature Date

NOTE If "as built", then "as built" plans must be attached to this certification.

This sediment control system consists of:

Sediment Ponds No. 011, _____, _____, _____
Diversions (describe in relation to pond numbers)

Other control methods (describe if different from permit descriptions)

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ATTACHMENT 20
(SEDIMENTATION POND/IMPOUNDMENT DATA SHEET)

Applicant's Name BENNOC, INC. Pond # AS-BUILT 011

Type of impoundment EXCAVATED Permanent X, Temporary _____

1. POND DRAINAGE AREA DATA:

a) Drainage area 131 acres
b) Disturbed area 63 acres SEE ITEM 8.
c) Ave. land slope 20 %
d) Hydrologic soil group B&C
e) Hydraulic length 2450 ft.
f) Cover/condition of the undisturbed area PASTURE & WOODS FAIR

2. DESIGN STORM CRITERIA:

a) Method:

1) Design method (s) including computer programs: SEDCAD +

2) SCS curve number 78

b) Rainfall Amount/Peak Flow	Rainfall, in.	Peak flow, cfs.
1) 10 year, 24 hour =	3.7	230
2) 25 year, 24 hour =	4.3	291
3) 50 year, 6 hour = (if permanent)		
4) 100 year, 6 hour = (if 20/20 size)		

3. POND SIZE:

a) Dimensions: N/A

1) Dam height 1.5 ft.
2) Dam width 8.5 ft.(MIN)
3) Dam length 760 ft.
4) Dam downstream slope 33 % (MAX)
5) Dam upstream slope 50 % (MAX)
6) Core length ____ ft. ____ ft. ___ ft.

b) Sediment storage volume 4.7 ac. ft. is provided below the 935.5 foot elevation.

c) Stage/Area Data:	Elevation ft.	Surface Area ac.	Volume ac. ft.
1) Bottom of pond	930.0	0.19	0
2) Streambed at upstream toe:	N/A	N/A	N/A
3) Principal spillway inlet:	N/A	N/A	N/A
4) Exit Channel Crest:	935.5	1.16	4.7
5) Top of embankment:	938.0	1.54	8.1

PRINCIPAL SPILLWAY: N/A

a) Pipe length _____ ft.
b) Pipe diameter _____ in.
c) Pipe slope _____ %
d) Riser diameter _____ in.
e) Riser height _____ ft.
f) Type of pipe _____
g) Number of anti-seep collars _____; spacing along pipe _____ ft.
h) Does the design include a trash rack? _____ Yes, _____ No.
i) Does the design include an anti-vortex device? _____ Yes, _____ No.

5. EMERGENCY SPILLWAY/EXIT CHANNEL:

a) Base width 21 ft.
b) Design flow depth 1.5 ft.
c) Exit slope 3.2 %
d) Exit velocity 7.2 fps
e) Channel lining ROCK RIPRAP
f) Side slopes 4:1
g) Freeboard 1.0 ft.
h) Entrance slope 50 %
i) Length of level section 15 ft.

6. The minimum static factor of safety for this impoundment is 1.5

7. Provide as an addendum to this attachment a detailed plan view or 2 cross sections of the impoundment.

8. COMMENTS: INCLUDES POSSIBLE FUTURE AREAS THAT MAY BE INCLUDED BY ADJACENT AREA PERMIT. POND AS CONSTRUCTED IS CAPABLE OF HANDLING THE RUNOFF FROM 47.0 ACRES.

9. Is this an MSHA structure? _____Yes, X No. If "yes," provide the MSHA ID. number if one has been assigned _____.

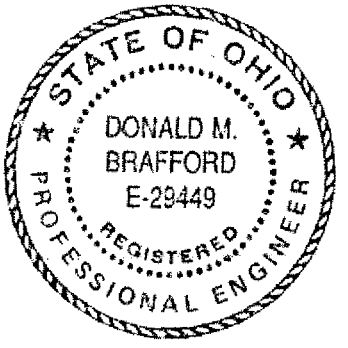
10. If this is to be retained as a permanent impoundment, submit an addendum to this attachment demonstrating compliance with rule 1501:13-9-04(H) (2) of the Administrative Code.

11. I hereby certify that this impoundment is designed to comply with the applicable requirements of rule 1501:13-9-04 of the Administrative Code using current, prudent engineering practices.

Donald M Brafford, P.E.
Signature

2/4/98
Date

P.E. SEAL



ADDENDUM TO ATTACHMENT 20, ITEM 10, POND 011
BENNOC, INC.

PERMANENT POND 011

RULE 1501:13-9-04(H)(2)

a) AS SHOWN ON THE APPLICATION MAP, THE SIZE AND CONFIGURATION OF POND 011 IS ADEQUATE FOR ITS INTENDED PURPOSE.

b) EVALUATION OF PRE-MINING WATER QUALITY AS SHOWN ON THE ATTACHMENT 14A'S AND OVERBURDEN CHARACTERISTICS SHOWN ON THE ATTACHMENT 12'S DEMONSTRATE THAT WATER QUALITY WILL NOT BE DEGRADED BY THIS PERMANENT IMPOUNDMENT. MONTHLY MONITORING OF THE POND'S DISCHARGE DURING THE LIFE OF THE PERMIT WILL FURTHER DEMONSTRATE THAT WATER QUALITY WILL BE SUITABLE FOR THE PROPOSED POST-MINING LAND USE AND THAT IT WILL MEET EFFLUENT LIMITATIONS ESTABLISHED PURSUANT TO APPLICABLE STATE AND FEDERAL STANDARDS.

c) THE RATIO OF THE WATERSHED AREA TO THE POND AREA AT NORMAL POOL LEVEL WILL PROVIDE A STABLE WATER LEVEL CAPABLE OF SUPPORTING THE POST MINING LAND USE.

d) FINAL GRADING WILL PROVIDE SAFE AND ADEQUATE ACCESS TO THE WATER IMPOUNDMENT.

e) POND 011 WILL BE MONITORED AS REQUIRED AND TREATED IF NECESSARY PRIOR TO DISCHARGE, THEREFORE DIMINUTION OF THE QUALITY OF THE WATER UTILIZED BY SURROUNDING LANDOWNERS SHOULD NOT OCCUR. BASED ON THE SIZE AND CHARACTERISTICS OF THE CONTRIBUTING WATERSHED, DIMINUTION OF WATER QUANTITY SHOULD NOT OCCUR.

f) SINCE THE IMPOUNDMENT WILL BE USED FOR AGRICULTURAL PURPOSES IT WILL BE SUITABLE FOR THE POST MINING LAND USE. IT WILL ALSO CREATE A HABITAT FOR FISH AND WILDLIFE.

g) THERE WILL BE NO HIGHWALLS WITHIN THE LIMITS OF THE IMPOUNDMENT.

h) THERE WILL BE NO REDUCED HIGHWALL FACES WITHIN THE LIMITS OF THE IMPOUNDMENT.